

Half Yearly Examination 2019-20
Sub. : Mathematics
Class : VII

Time : 2.30 Hrs.

M.M. : 80

1P
2

Q.1 Find the product : (VSA) $6 \times 1 = 6$
 $(-1) \times (-5) \times (-4) \times (-6)$

Q.2 Write 2 equivalent fractions of $\frac{3}{5}$.

Q.3 Write equations for :- "Three - Fourth of t is 15."

Q.4 What is the measure of the complement of 55° ?

Q.5 How many medians and altitudes can a triangle have?

Q.6 Triangle $DEF \cong \triangle BCA$. Write the parts of $\triangle BCA$ that correspond to

a) $\angle E$

b) \overline{EF}



(SA) $6 \times 2 = 12$

Q.7 Write down a pair of integers whose :-

a) Sum is -7

b) Sum is 0

Q.8 Solve the equations :-

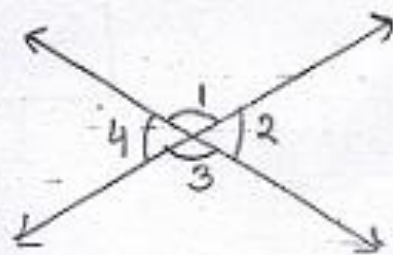
a) $\frac{20P}{3} = 40$

b) $2q + 6 = 0$

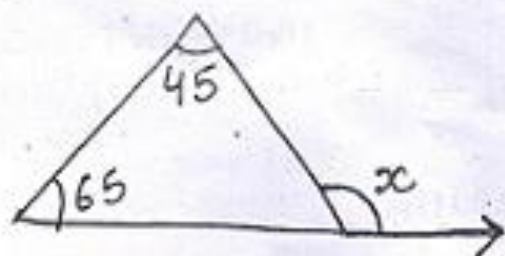
Q.9 Indicate which pairs of angles are :-

a) Vertically opposite angles

b) Linear pair



Q.10 Find the exterior angle x :-



Q.11 Find the ratio of 3km to 300m.

Q.12 Convert decimal fraction to percents.

- a) 0.65 b) 0.02

Q.13 Which is greater?

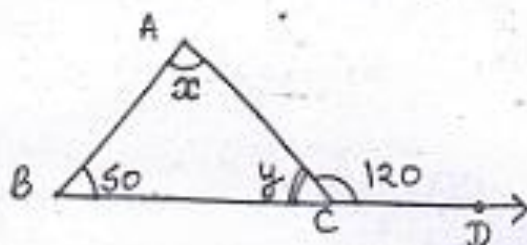
$$10 \times 3 = 30$$

- a) 0.5 () 0.05
b) 2.03 () 2.30
c) 0.8 () 0.88

Q.14 Find the mean of the first 10 whole numbers.

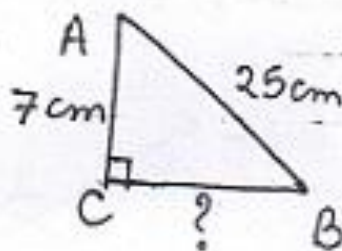
Q.15 Solve the equation :- $34 - 5(P - 1) = 4$

Q.16 Find the values of the unknown x and y :-



Q.17 Is it possible to have a triangle with these sides :-
3cm, 6cm, 7cm

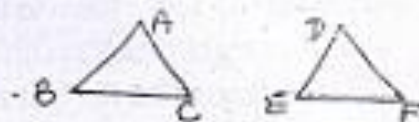
Q.18 ABC is a triangle, right angled at C. If $AB = 25\text{cm}$ and $AC = 7\text{cm}$, find BC.



Q.19 Which congruence criterion do you use in the following :-

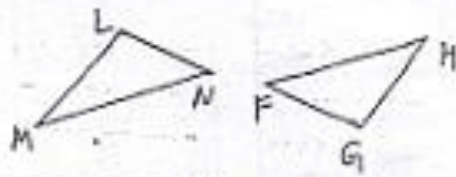
- a) $AC = DF$
 $AB = DE$
 $BC = EF$

So, $\Delta ABC \cong \Delta DEF$ by _____?

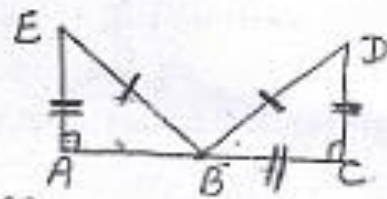


- b) $\angle MLN = \angle FGH$
 $\angle NML = \angle GFH$
 $ML = FG$

So, $\Delta LMN \cong \Delta GFH$ by _____.



- c) $EB = DB$
 $AE = BC$
 $\angle A = \angle C = 90^\circ$
 So, $\Delta ABE \cong \Delta CDB$



Q.20 Find :- a) 15% of 250 b) 20% of Rs. 2500.

Q.21 A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they win?

Q.22 Convert each part of the ratio to percentage :- a) 3 : 1 b) 2 : 3 : 5

Q.23 Find the amount to be paid at the end of 3 years, where $8 \times 4 = 32$

$P = \text{Rs. } 1200$

$R = 12\% \text{ p.a.}$

Q.24 I buy a T.V. for Rs. 10,000 and sell it at a profit of 20%. How much money do I get for it?

Q.25 You want to show that $\Delta ART \cong \Delta PEN$

a) If it is given that $\angle T = \angle N$ and you are to use SAS criterion you need to have

i) $RT = \underline{\hspace{2cm}}$ and

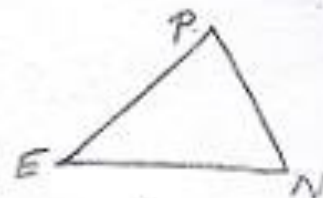
ii) $PN = \underline{\hspace{2cm}}$



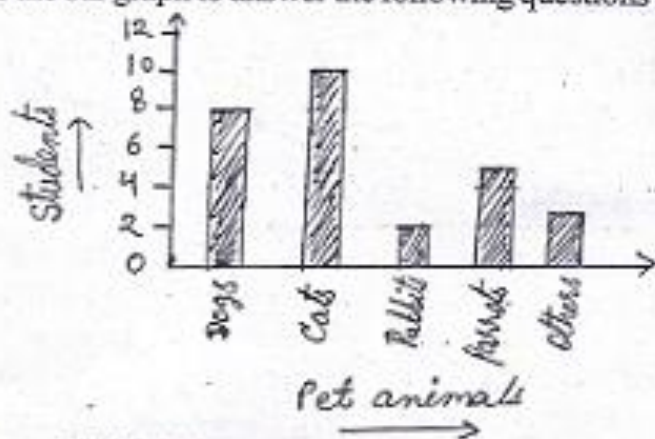
b) If it is given that $AT = PN$ and you are to use ASA criterion you need to have

i) ?

ii) ?



- Q.26 The length of two sides of a triangle are 12cm and 15cm. Between what two measures should the length of the third side fall?
- Q.27 Set up equations and solve them to find the unknown numbers in the following :-
- Add 4 to eight times a number; you get 60.
 - If I take three-fourths of a number and add 3 to it, I get 21.
- Q.28 Use the bar graph to answer the following questions :

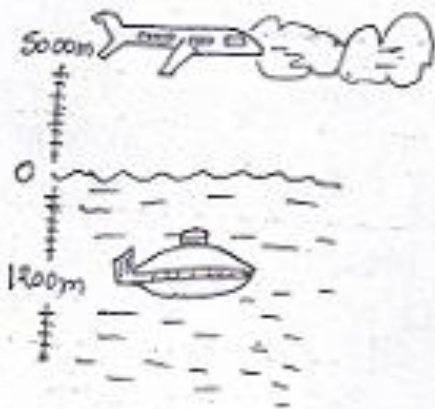


- Which is the most popular pet?
 - How many students have dog as pet?
 - How many total students have Rabbits and parrots as a pet?
 - Five students have _____ animals as their pets.
- Q.29 Find :-

a) $3\frac{1}{5} \div 1\frac{2}{3}$

b) $2\frac{1}{5} \div 1\frac{1}{5}$

- Q.30 A plane is flying at the height of 5000m above the sea level. At a particular point, it is exactly above a submarine floating 1200m below the sea level. What is the vertical distance between them?



SET-1

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SUBJECT – MATHS

BLUE PRINT FOR HALF YEARLY EXAM : CLASS - VII

Unit and Topics	(VSA) 1marks	Short Ans(2marks)	Short Ans.(3 marks)	Long Ans. (4marks)	Total
Integers	1(1)	1(2)		1(4)	3(7)
Fractions and Decimals	1(1)		1(3)	1(4)	3(8)
Data Handling			1(3)	1(4)	2(7)
Simple Equation	1(1)	1(2)	1(3)	1(4)	4(10)
Lines and Angles	1(1)	1(2)			2(3)
Triangles and it's Properties	1(1)	1(2)	3(9)	1(4)	6(16)
Congruence of Triangles	1(1)		1(3)	1(4)	3(8)
Comparing Quantities		2(4)	3(9)	2(2)	7(21)
Total	6(6)	6(12)	10(30)	8(32)	30(80)

Q1 Ans 120

(1)

Q2 $\frac{6}{10}$ and $\frac{9}{15}$

($\frac{1}{2} + \frac{1}{2}$)

Q3 $\frac{3}{4}t = 15$

(1)

Q4 35°

(1)

Q5 3 medians & 3 altitudes

($\frac{1}{2} + \frac{1}{2}$)

Q6 (a) $\angle E \leftrightarrow \angle C$; (b) $\overline{EF} \leftrightarrow \overline{CA}$

($\frac{1}{2} + \frac{1}{2}$)

Q7 (a) $(-3) + (-4)$

(1)

(b) $(-5) + (+5)$

(1)

Q8 (a) $p = 6$; (b) $q = -3$

(1+1)

Q9 (a) $\angle 1 \leftrightarrow \angle 3$; $\angle 4 \leftrightarrow \angle 2$

($\frac{1}{2} + \frac{1}{2}$)

(b) $\angle 1 \leftrightarrow \angle 4$; $\angle 2 \leftrightarrow \angle 3$

($\frac{1}{2} + \frac{1}{2}$)

Q10 using exterior \angle prop.
 $x = 110^\circ$

(1+1)

Q11 $\frac{3000m}{300m} = 10m$

(1+1)

Q12 (a) 65% (b) 2%

(1+1)

Q13 (a) $>$

(1)

(b) $<$

(1)

(c) $<$

(1)

Q14 $\frac{(0+1+2+3+4+5+6+7+8+9)}{10} = 4.5$

(2+1)

Q16 $x = 120 - 50 = 70$ (1/2)
 $y = 180 - 120 = 60$ (1/2)

Q17 Yes, $3 + 6 > 7$ (1)
 $6 + 7 > 3$ (1)
 $7 + 3 > 6$ (1)

Q18 $25^2 = 7^2 + BC^2$ (1)
 $BC^2 = 625 - 49$
 $BC^2 = 576$ (1)
 $BC = 24$ (1)

- Q19 (a) SSS congruence criterion (1)
(b) ASA " " (1)
(c) RHS " " (1)

Q20 (a) $\frac{15}{100}$ of 250 = $1\frac{1}{2}$ (1 + 1/2)
(b) $\frac{20}{100}$ of ₹2500 = ₹500 (1 + 1/2)

Q21 $\frac{25}{100}$ of 20 = 5 matches (1 + 1 + 1)

Q22 $3 + 1 = 4$ (1/2)
(a) $\frac{3}{4} \times 100 = 75\%$ and $\frac{1}{4} \times 100 = 25\%$ (1/2 + 1/2)

(b) $2 + 3 + 5 = 10$ (1/2)
 $\frac{2}{10} \times 100 = 20\%$; $\frac{3}{10} \times 100 = 30\%$ and $\frac{5}{10} \times 100 = 50\%$ (1/2 + 1/2)

Q23 S.I. = $\frac{PRT}{100} = \frac{1200 \times 12 \times 3}{100}$ (1/2 + 1/2)

SI = 432 (1)

A = P + SI (1)

Q24 $P\% = \frac{P}{CP} \times 100$ (1/2) Marks

$20 = \frac{P}{10000} \times 100$ (1)

$P = 2000\%$ (1)

$P = SP - CP$ (1/2)

$SP = P + CP$ (1)

$SP = \text{Rs. } 12000$ (1)

Q25 (i) $RT = EN$ and (1)

(ii) $PN = AT$ (1)

(b) $LA = LP$ (1)

$LT = LN$ (1)

Q26 $15 - 12 = 3 \text{ cm}$ (1+1)

and $15 + 12 = 27 \text{ cm}$ (1+1)

Q27 (a) $8x + 4 = 60$ (1+1)

$x = 7$

(b) $\frac{3}{4}x + 3 = 21$ (1+1)

$x = 24$

Q28 (a) cat (1)

(b) 8 students (1)

(c) 7 students (1)

(d) parrot (1)

Q29 (a) $\frac{16}{5} \div \frac{5}{3}$ (1/2)

$= \frac{16}{5} \times \frac{3}{5}$ (1)

Marks

$$(b) \quad \frac{11}{5} \div \frac{6}{5}$$

$$= \frac{11}{5} \times \frac{5}{6}$$

$$= \frac{11}{6}$$

$$\underline{\underline{Q30}} \quad (+5000\text{m}) - (-1200\text{m})$$

$$= 5000\text{m} + 1200\text{m}$$

$$= 6200\text{m}$$